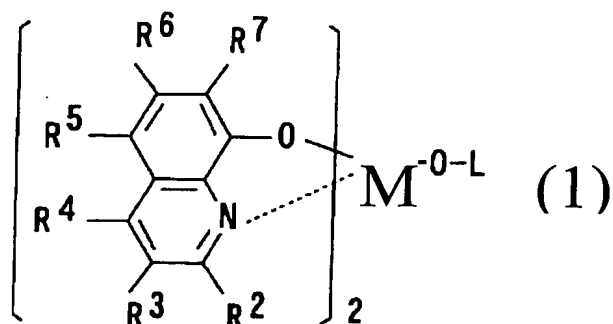


CLAIMS

1. An organic electroluminescence device comprising a cathode, an anode and an organic thin film layer which is sandwiched between the cathode and the anode and comprises at least one layer containing a light emitting layer comprising a phosphorescent light emitting compound, wherein the organic electroluminescence device further comprises an electron injecting layer which is adhered to the cathode and comprises at least one compound selected from metal chelate complexes with a ring having nitrogen atom, five-membered cyclic derivatives having nitrogen atom, non-condensed six-membered cyclic derivatives having nitrogen atom and condensed six-membered cyclic derivatives having nitrogen atom and one condensed carbon ring as a main component and at least one compound selected from alkali metals, alkali metal complexes, alkali metal compounds, alkaline earth metals, alkaline earth metal complexes, alkaline earth metal compounds, rare earth metals, rare earth metal complexes and rare earth metal compounds as a reductive dopant.
2. An electroluminescence device according to Claim 1, wherein the metal chelate complex with a ring having nitrogen atom is a compound represented by following general formula (1):

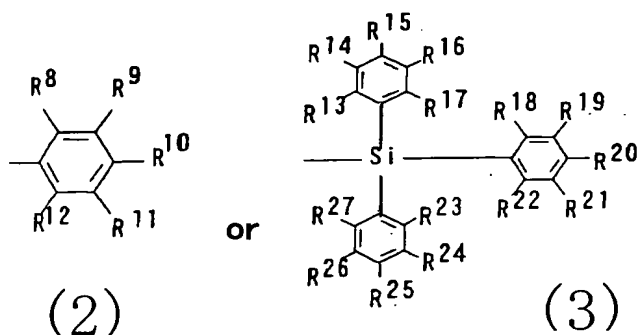


5

wherein R² to R⁷ each independently represent hydrogen atom, a halogen atom, an oxy group, an amino group or a hydrocarbon group having 1 to 40 carbon atoms, each of which may be substituted,

M represents aluminum, gallium or indium, and

10 L represents a group represented by following general formula (2) or (3):



15

wherein R⁸ to R¹² each independently represent hydrogen atom or a substituted or unsubstituted hydrocarbon group having 1 to 40 carbon atoms, adjacent groups represented by R⁸ to R¹² may be bonded to each other to form a cyclic structure, R¹³ to R²⁷ each independently represent hydrogen atom or a substituted or unsubstituted hydrocarbon group having 1 to 40 carbon atoms, and adjacent groups represented by R¹³ to

20

R²⁷ may be bonded to each other to form a cyclic structure.

3. An electroluminescence device according to Claim 1, wherein a five-membered ring having nitrogen atom in the five-membered cyclic derivatives having nitrogen atom is imidazole ring, triazole ring, tetrazole ring, thiadiazole ring, oxatriazole ring or thiatriazole ring.

4. An electroluminescence device according to Claim 3, wherein the imidazole ring is benzimidazole ring, pyrimidinoimidazole ring, pyridinoimidazole ring or pyridazinoimidazole ring.

5. An electroluminescence device according to Claim 1, wherein a non-condensed six-membered ring having nitrogen atom in the non-condensed six-membered cyclic derivatives having nitrogen atom is pyridine, pyrazine or pyrimidine.

6. An electroluminescence device according to Claim 1, wherein a condensed six-membered ring having nitrogen atom in the condensed six-membered cyclic derivatives having nitrogen atom and one condensed carbon ring is quinoxaline, quinoline, isoquinoline or benzopyrimidine.

7. An electroluminescence device according to Claim 6, wherein the condensed six-membered ring in the condensed six-membered cyclic derivatives having nitrogen atom and one condensed carbon ring is triphenylquinoxaline, triphenylquinoline, triphenylbenzo pyrimidine or those derived from a dimer or a trimer of these rings.

8. An electroluminescence device according to Claim 1, wherein the reductive dopant is added into an interfacial region between the electron injecting layer and the cathode in a form of a layer or islands.

5

9. An electroluminescence device according to Claim 1, wherein the light emitting layer comprises a host material and a phosphorescent metal complex.

10 10. An electroluminescence device according to Claim 9, wherein the phosphorescent metal complex is an iridium complex, an osmium complex or a platinum complex.